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**What is claimed is:**

1. A method for upgrading an execution code of a portable memory device, wherein said execution code is stored in a programmable non-volatile memory unit of said portable memory device, said method comprising:

(a) providing a host computer, said host computer having a first execution code and a driver upgrading mechanism;

(b) establishing a communicating link between said host computer and said portable memory device;

(c) checking a upgrading signal, and restoring said first execution code of said host computer to said programmable non-volatile memory unit of said portable memory device according to said upgrading signal; and

(d) starting said portable memory device according to said upgraded execution code of said portable memory device.

2. The method of claim 1, wherein the step of establishing said communicating link further comprises:

(b1) connecting said portable memory device and a connecting device, wherein said connecting device transfers data between said portable memory device and said host computer by a predetermined protocol;

(b2) providing a power source to said portable memory device from said host computer.

3. The method of claim 1, wherein the step of said checking said upgrading signal comprises:

(c1) reading a version of said execution code of said portable memory device by said host computer, and comparing said version of said execution code of said portable memory device with a version of said first execution code of said host computer; and

(c2) outputting said upgrading signal from said host computer when said version of said first execution code of said host computer is newer than said version of said execution code of said portable memory device.

4. The method of claim 1, wherein the step of said restoring said first

execution code comprises:

(d1) the execution code overwrite module in the external host device writes the new version execution code stored in the external host device into portable memory device and verify the transferred execution code;

(d2) deleting said execution code stored in said programmable non-volatile memory unit of said portable memory device; and

(d3) writing said first execution code of said host computer in said programmable non-volatile memory unit of said portable memory device.

5. The method of claim 1, wherein said portable memory device is a solid state disk.

6. The method of claim 1, wherein said host computer links to a remote server through a network and downloads a new version of said execution code and a file contained said execution code upgrading mechanism over said network.

7. The method of claim 1, wherein said host computer comprises:

a memory device for storing at least one said execution code and said execution code upgrading mechanism of said host computer, wherein said execution code upgrading mechanism comprises a execution code version comparing module, a upgrading signal generating module and execution code writing module; and

a transfer interface for establishing said communicating link with said portable memory device and transferring data by said predetermined protocol, and

a control unit, coupled to said memory device and said transfer interface, for controlling said memory device and said transfer interface, being able to be driven by said execution code upgrading mechanism, and upgrading said execution code of portable memory device.

8. The method of claim 1, wherein said portable memory device further comprises a control chip, wherein said programmable non-volatile memory unit builds in said control chip.



execution code upgrading mechanism of said host computer, wherein said execution code upgrading mechanism comprises a execution code version comparing module, a upgrading signal generating module and a execution code writing module,

wherein said execution code version comparing module compares a version of said execution code of said portable memory device with a version of a first execution code of said host computer and produces a result of comparison,

wherein said upgrading signal generating module generates a upgrading signal according to said result of comparison,

wherein said execution code writing module initializes a procedure for writing said first execution code of said host computer into said programmable non-volatile memory unit of said portable memory device;

a transfer interface for establishing said communicating link with said portable memory device and transferring data by a predetermined protocol, and

a control unit, coupled to said memory device and said transfer interface, for controlling said memory device and said transfer interface, being able to be driven by said execution code upgrading mechanism, and upgrading said execution code of portable memory device.

13.The apparatus of claim 12, wherein said portable memory device is a solid state disk.

14.The apparatus of claim 12, wherein said host computer links to a remote server through a network and downloads a new version of said execution code and a file contained said execution code upgrading mechanism over said network.

15.The apparatus of claim 12, wherein said portable memory device further comprises a control chip, wherein said programmable non-volatile memory unit builds in said control chip.

16.The apparatus of claim 12, wherein said portable memory device

comprises a plurality of memory blocks of said programmable non-volatile memory unit, each of said memory blocks stores a plurality of said execution codes which are in different versions, said execution code writing module initializes said procedure for writing said first execution code of said host computer into said memory block which stores an oldest version of said execution code according to said upgrading signal.

17. The apparatus of claim 12, wherein said programmable non-volatile memory unit is an independent memory chip.

18. The apparatus of claim 12, wherein said portable memory device comprises a programmable memory array for storing external data, said programmable non-volatile memory unit is a portion of said programmable non-volatile memory array.

19. The apparatus of claim 12, wherein portable memory device is a memory card and said connection device is a memory card reader.

20. The apparatus of claim 12, wherein said connection device builds in said host computer.

21. A host computer for upgrading an execution code of a portable memory device, wherein said execution code is stored in a programmable non-volatile memory unit of said portable memory device, comprising:

a memory device for storing at least one said execution code and said execution code upgrading mechanism of said host computer, wherein said execution code upgrading mechanism comprises a execution code version comparing module, a upgrading signal generating module and a execution code writing module,

wherein said execution code version comparing module compares a version of said execution code of said portable memory device with a version of a first execution code of said host computer and produces a result of comparison,

wherein said upgrading signal generating module generates an upgrading signal according to said result of comparison,

wherein said execution code writing module initializes a procedure for

writing said first execution code of said host computer into said programmable non-volatile memory unit of said portable memory device;

a connection device coupling to said portable memory device; and

5 a control unit, coupled to said memory device, for controlling said memory device, being able to be driven by said execution code upgrading mechanism, and upgrading said execution code of portable memory device.

10 22. The host computer of claim 21, wherein said host computer links to a remote server through a network and downloads a new version of said execution code and a file contained said execution code upgrading mechanism over said network.

15 23. The host computer of claim 21, wherein said portable memory device comprises a plurality of memory blocks of said programmable non-volatile memory unit, each of said memory blocks stores a plurality of said execution codes which are in different versions, said execution code writing module initializes said procedure for writing said first execution code of said host computer into said memory block which stores an oldest version of said execution code according to said  
20 upgrading signal.